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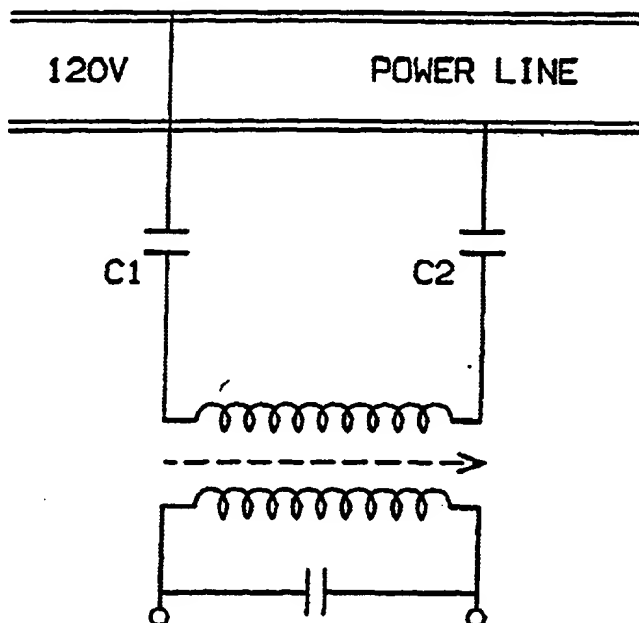


283

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(54) Title: **POWER-LINE COMMUNICATION APPARATUS**



(57) Abstract

Apparatus for power system communications includes a coupler at each of two or more locations along a pair of power-lines, the coupler having a pair of serial LC circuits with an air coil. A transmitter, a receiver, and a modem is also provided at each of the locations such that each of the serial LC circuits of the couplers resonate at a given frequency. The apparatus incorporates novel non-linear transformers which eliminate the signal from the power line and its harmonics, and which permit rapid transmission of signals for communications and other uses.